

IN THE CLAIMS

Claims 1-20 (Canceled).

21. (Currently Amended) A method comprising:

applying ~~[[an]]~~ first and second electric field ~~gradient~~ gradients to a solution containing charged particles under conditions that will cause ~~at least some of the~~ negatively and positively charged particles to simultaneously focus along the length of a first channel formed in a device, the negatively charged particles to focus in the first channel in one direction, the positively charged particles to focus in the first channel in the opposite direction; and

without transfer, applying ~~[[an]]~~ another electric field ~~to the focused charged particles~~ to cause at least some of the focused, negatively charged particles to migrate through a sieve disposed in ~~at least~~ one second channel in said device~~[[,]]~~ and at least some of the focused, positively charged particles to migrate through the sieve disposed in another second channel in said device, said at least one second channel and said another second channel situated proximate an area where at least some of said negatively and positively charged particles have focused respectively, both of ~~[[and]]~~ said at least one second channel channels transverse to said first channel and in communication therewith.

22. (Currently Amended) The method of claim 21 ~~wherein applying the electric field gradient to the solution containing charged particles under conditions that will cause at least some of the charged particles to focus in the first channel includes~~ including causing at ~~least some of the~~ negatively charged particles to separate and focus along the length of the first channel such that groups of negatively charged particles are focused at or near ~~said at least one~~ each one second channel in a plurality of said one second channel channels.

23. (Currently Amended) The method of claim 22 ~~wherein applying the electric field gradient to the solution containing charged particles under conditions that will cause at least some of the charged particles to focus in said first channel includes~~ including establishing a convective force in said solution, said convective force to oppose the first and the second electric field gradients.

Claims 24-25 (Canceled).

26. (Currently Amended) The method of claim 21 further including causing said focused positively charged particles to ~~[[be]]~~ become negatively charged.

27. (Currently Amended) The method of claim 21 wherein applying ~~[[an]]~~ first and second electric field ~~gradient~~ gradients includes applying ~~[[a]]~~ two linear electric field ~~gradient~~ gradients.

28. (Currently Amended) The method of claim ~~[[21]]~~ 26 further including detecting ~~said~~ charged particles in both of said ~~at least one~~ second ~~channel~~ channels.

29. (Currently Amended) The method of claim 28 wherein detecting charged particles in both of said ~~at least one~~ second ~~channel~~ channels includes detecting a change in conductivity in a region of said ~~at least one~~ second ~~channel~~ channels.

30. (Currently Amended) The method of claim 21 wherein applying the first and second electric field ~~gradient~~ gradients to the solution containing charged particles includes applying ~~[[an]]~~ first and second electric field ~~gradient~~ gradients to a solution containing proteins or portions thereof.

31. (Currently Amended) A method comprising:
 applying, at the same time, a first electric field gradient and a second electric field gradient to a solution containing charged particles; and
 causing negatively charged particles to focus in a first channel in said first electric field gradient and positively charged particles to focus in said first channel in said

second electric field gradient, the negatively charged particles and positively charged particles to focus in the first channel in opposite directions.

32. (Previously Presented) The method of claim 31 including causing at least some of the negatively charged particles to focus at or near at least one second channel and at least some of the positively charged particles to focus at or near another second channel.

33. (Previously Presented) The method of claim 31 wherein causing negatively charged particles to focus in a first channel in a first electric field includes causing said negatively charged particles to focus in bands along the length of the first channel.

34. (New) The method of claim 23 wherein establishing a convective force includes establishing a convective force using gravity.

35. (New) The method of claim 23 wherein establishing a convective force includes establishing a convective force using a pump.

36. (New) A method comprising:
disposing a sample containing charged particles in a centrally located reservoir formed on a substrate, said centrally located reservoir disposed at midpoint of a first channel formed in said substrate and in communication therewith; and
causing negatively and positively charged particles to focus in the first channel, said negatively charged particles to focus in said first channel in one direction, away from said centrally located reservoir, said positively charged particles to focus in said first channel in another direction, opposite said one direction, and away from said centrally located reservoir.

37. (New) The method of claim 36 wherein causing negatively and positively charged particles to focus in a first channel includes applying first and second electric field gradients to a solution containing the charged particles.

38. (New) The method of claim 37 including applying said first and second electric field gradients to the solution at the same time.

39. (New) The method of claim 36 wherein causing negatively and positively charged particles to focus in a first channel formed in a substrate includes establishing a convective force in a fluid disposed in said first channel, said fluid to flow in said first channel from a first end reservoir and a second end reservoir toward the centrally located reservoir, said first and second end reservoirs disposed at opposite ends of said first channel and in communication therewith.